



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/787,444	03/19/2001	Alfred Busch	CM2107/DO	2144

27752 7590 02/14/2002

THE PROCTER & GAMBLE COMPANY  
PATENT DIVISION  
IVORYDALE TECHNICAL CENTER - BOX 474  
5299 SPRING GROVE AVENUE  
CINCINNATI, OH 45217

EXAMINER

KUMAR, PREETI

ART UNIT	PAPER NUMBER
----------	--------------

1751

DATE MAILED: 02/14/2002

74

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/787,444

Applicant(s)

BUSCH ET AL.

Examiner

Preeti Kumar

Art Unit

1751

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### DETAILED ACTION

1. Claims 2-5 and 8-13 have been amended. Claims 1-13 are pending.

#### ***Priority***

2. Acknowledgment is made of applicant's claim for foreign priority based on an application filed as a PCT application on September 30, 1998. It is noted, however, that applicant has not filed a certified copy of the PCT/US98/20491 prior foreign application as required by 35 U.S.C. 119(b).

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 3, 5, 7-8 and 11-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 7, this claim is deemed unsearchable for prior art purposes, since the indefinite claim terminology creates great uncertainty as to the actual claim limitations or how to apply any potential prior art. Note that where there is a great deal of confusion and uncertainty as to the proper interpretation of the limitations of a claim, it would not be proper to reject such a claim on the basis of prior art. "As stated in *In re Steele*, 305 R.2d 859, 134 USPQ 292 (CCPA 1962), a rejection under 35 U.S.C. 103 should not be based on considerable speculation about the meaning of terms employed in a claim or assumptions that must be made as to the scope of the claims." See MPEP 2173.06.

Art Unit: 1751

Claim 3 recites the limitation "wherein said amino acid sequence..." in claim 2.

Claims 5 and 8 recite the limitation, "... wherein said chemical component..." in claim 1.

There is insufficient antecedent basis for these limitations in the instant claims.

Claims 11-13 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The instant claims do not specifically mention a method step or steps such as contacting the fabric with the composition comprising applicant's invention.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 4, 9-13 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Lappas (EP0755999).

Lappas teaches in example 5, a granular fabric cleaning composition comprising a polymer with the name poly-4-vinylpyridine-N-oxide and a cellulase chemical entity in the specific proportions as recited by the instant claim 1 and 9. Also, regarding claim 4, Lappas teaches the utility of dye fixative agents such as poly-4-vinylpyridine-N-oxide and bleaching agents such as TAED. See the table on page 24. Regarding claims 10-13, Lappas teaches soil release polymers such as EDDS and a method of treating a fabric with a composition comprising a chemical entity. See example 5 and pg. 17,

Art Unit: 1751

In.45-59. Accordingly, the teachings of Lappas are sufficient to anticipate the material limitations of the instant claim.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 1-6, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fowler et al. (US 6,268,196).

Fowler et al. teach the utility of cellulases derived from *Trichoderma longibrachiatum* (previously classified as *Trichoderma reesei*) in the treatment of cellulose containing fabrics. See col.8; In.60-65. Also, bacterial cellulases from *Thermonospora* sp., *Cellulomonas* sp., *Bacillus* sp., are known to possess a binding domain region and a core region. Many cellulase enzymes, including cellulases from, for example, *T. longibrachiatum* and *Humicola insolens* are known to incorporate a

Art Unit: 1751

catalytic core domain subunit which is attached via a linker region to a cellulose binding domain subunit. See col.11; ln.50-55.

Specifically regarding claim 3, Fowler et al. teach motivation of using a CBH I cellulose binding domain derived from *Trichoderma longibrachiatum* that when used in combination with some endoglucanase (EG) type components, in a ratio of 2.5:1 of CBH I to EG components, the CBH I component of *Trichoderma longibrachiatum* imparts enhanced strength loss to the denim fabric. See col.10; ln.50-55. Fowler et al. also teach that protein analysis of the cellobiohydrolases (CBHI and CBHII) and major endoglucanases (EGI and EGII) of *T. longibrachiatum* has shown that a bifunctional organization exists in the form of a catalytic core domain and a smaller cellulose binding domain separated by a linker or flexible hydroxyamino acids. See col.3; ln.19-25. The cellulose binding domain and catalytic core of *Cellulomonas fimi* endoglucanase A (C.fimi Cen A) exhibit a similar bifunctional organization of cellulase enzymes. See col.3, ln.34-40.

Regarding claim 4, Fowler et al. teach that combination of the cellulase with a bleaching agent further improves the detergenting effects. See col.26, ln.33-39.

Regarding claims 5-6 and 8-9, Fowler et al. teach a linking region between the catalytically active amino acid sequence of a cellulolytic enzyme EGI and the amino acid sequence comprising a cellulose binding domain. See col.11; ln.50-55. Further preferably, the cellulase is present in a concentration of from about 0.1 to 1,000 ppm, more preferable from about 0.5 to about 250 ppm. See col.4, ln.30-35. The truncated

Art Unit: 1751

cellulase enzyme is employed from about 0.0001 to about 1% weight percent based on the total weight of the pre-soak or pre-treatment composition. See col.28, ln.25-30.

However, Fowler et al. do not specifically teach a laundry detergent composition comprising a polymer and a chemical entity comprising a deposition aid having a high affinity for cellulose and a benefit agent; wherein the chemical entity is linked via a weak bond and is comprised at a level of from 0.00001% to 50% by weight of the total composition.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to formulate a laundry detergent composition comprising a polymer and a chemical entity comprising a deposition aid having a high affinity for cellulose and a benefit agent, because Fowler et al. suggest a laundry detergent composition comprising a polymer and a chemical entity comprising a deposition aid having a high affinity for cellulose and a benefit agent, and further, Fowler et al. suggest the use of cellulose binding domain in a similar enzyme containing laundry detergent.

10. Claim1, 2, 4-6, 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al. (WO 98/00500).

Jones et al. teach a composition comprising a peptide or protein Deposition Aid having a high affinity for fibers or a surface and attached/adsorbed to the peptide or protein deposition aid a benefit agent. The composition effectively deposits the Benefit Agent onto fabric during the wash cycle. See abstract. Jones et al. also teach the utility of antiredeposition agents such as cellulosic polymers, soil release polymers, fluorescers, and decoupling polymers. See pg.15, ln.20-30.

Art Unit: 1751

Jones et al. teach a preferred benefit agent is selected from a fabric softening agent, a perfume, a latex, a resin, an insecticide, a soil release agent, or a soil repelling agent. See pg.5 ln.5-15 & claim 10.

Jones et al. teach that if the benefit is attached to the peptide/protein Deposition Aid, this is via a linking agent. Suitable linking agents are molecules with show a high affinity for the Benefit Agent. It is preferred if the linking agent is covalently attached to the peptide/protein Deposition Aid, it is also advantageous if the linking agent is covalently bound to the Benefit agent. Preferred linking agents are selected from various amino acid linking agents. See pg.7, ln.20-35 & pg.8, ln.1-3 & claims 2-4. Suitable enzymes that may be used with the peptide/protein Deposition Aid include the proteases, amylases, and cellulases for incorporation in detergent compositions. See pg.14, ln.1-10 & claim 9.

Jones et al. teach that if the peptide/protein Deposition Aid is not an enzyme, it can have a chemical structure similar or identical in structure to that of a binding site of an enzyme. See claim 8.

However, Jones et al. do not specifically teach a laundry detergent composition comprising a polymer, a chemical entity comprising a deposition aid having a high affinity for cellulose, a benefit agent, and the other requisite components of the composition in the specific proportions as recited by the instant claims.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to formulate a laundry detergent composition comprising a polymer, a chemical entity comprising a deposition aid having a high affinity for



Art Unit: 1751

cellulose, a benefit agent and the other requisite components of the composition in the specific proportions as recited by the instant claims, with a reasonable expectation of success, because Jones et al. suggest the use of a detergent composition containing a polymer and the other requisite components of the composition in the specific proportions as recited by the instant claims.

11. Claims 3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al. (WO 98/00500) as applied to claims 1, 2, 4-6, 9-13 above and further in view of Fowler et al. (US 6,268,196).

Jones et al. and Fowler et al. are relied upon as set forth above. However, Jones et al. do not specifically teach a laundry detergent composition comprising a deposition aid having a high affinity for cellulose and a chemical component linked to a deposition aid via a weak bond as recited by the instant claims.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to formulate a laundry detergent composition having a chemical component linked to a deposition aid via a weak bond as recited by the instant claims, with a reasonable expectation of success, because Fowler et al. suggest the utility of cellulose binding domain for imparting beneficial laundering enzymes to fabric.

### ***Double Patenting***

12. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

Art Unit: 1751

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

13. Claims 1-13 provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-9 and 18-20 of copending Application No. 09/806,048.

Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1-9 and 18-20 of copending Application No. 09/806,048 encompass the material limitations of the instant claims.

This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

### ***Conclusion***

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Remaining references cited but not relied upon is considered to be cumulative to or less pertinent than those relied upon or discussed above.

15. Applicant is reminded that any evidence to be presented in accordance with 37 CFR 1.131 or 1.132 should be submitted before final rejection in order to be considered timely.

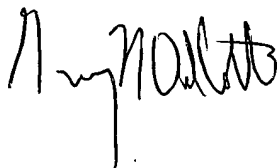
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Preeti Kumar whose telephone number is 703-305-0178. The examiner can normally be reached on M-F 9:00am - 5:30pm.

Art Unit: 1751

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on 703-308-4708. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

**GREGORY DELCOTTO**  
**PRIMARY EXAMINER**



Preeti Kumar  
Examiner  
Art Unit 1751

PK  
February 11, 2002